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REMARKS

Claims 1-22 are pending in the application.
Claims 1-4 and 8-22 were rejected.
Claims 1, 10 and 19 are amended.
Claims 4, 13, 16 and 21 are cancelled.
Claims 5-7 were objected to.

Objections

Claims 5-7 were indicated in the Office Action to include allowable subject matter. Applicants thank the Examiner for the indication of allowable subject matter.

Claim Rejections

Claims 1 and 10 were rejected under 35 USC 102(e) as being anticipated by Vanhoof et al. (US 6,298,049). In addition, Claims 1-4, 8-14 and 17-22 were rejected under 35 USC 103(a) as being unpatentable over Buckland (6,064,652) in view of Vanhoof. The remaining claims were further rejected in view of the above references and further in view of Quayle (5,912,998).

Applicants have amended Claims 1, 10 and 19 in a manner which is believed to overcome the cited prior art. Specifically, the subject matter of claims 4, 16 and 21 has been incorporated into the respective independent claim.

Applicants respectfully submit that the present invention as amended in claims 1 and 11 is distinguishable and non-obvious over the cited references. The present invention, as amended, claims a simple hardware based methodology for providing a predetermined sequence of upstream grants for use

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in a passive optical network using multiple grant tables of differing granularity. The grant tables are linked to one another so as to produce a predetermined output pattern. A clock divider having at least two different output frequencies triggers the grants from each of the linked grant tables in order to produce the desired output pattern. The methodology of the present invention has advantages over the prior art in that it is much simpler to implement than either of the devices described in the Vanhoof or Buckland references. As was stated in the background section of the application, a motivation for the instant invention was to provide a simple static-like grant table that was easy to implement while still providing the flexibility of differing granularities. Applicants respectfully submit that the Vanhoof reference does not teach or suggest a clock divider for providing differing grant table granularities to the first and second grant tables, respectively. As can be seen, for example, at Col. 5, lines 55-56, the control unit CTRL controls the operation of the filling device FILL. Moreover, at Col. 6, lines 12-15, it is stated that the fill device FILL calculates how the grant table memory T1 should be filled with terminal identifiers in order to obtain a fair share of the upstream capacity of the common link. Since the FILL device performs calculations under the direction of a controller CTRL, it is clear that the reference does not disclose providing grants by way of a clock divider as does the present invention.

The present invention is also advantageous in that it does not require complex dynamic grant generation software as does the device of the Vanhoof reference. As can be seen, unlike the device of the present invention, the device in the Vanhoof reference requires ongoing calculations in order to re-populate the grant tables. (See, for example, col. 6, lines 17-19 and 49-56.) The intended use for the present invention is in a mass deployed environment of fiber-to-the-home/fiber-to-the-building passive optical networks where static-like grant distribution is acceptable, and where deployment of complex and expensive

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dynamic schedulers like that described in the Vanhoof reference would make little practical sense.

Neither the Vanhoof reference (nor combination of Vanhoof and Buckland references) teaches or suggests all of the limitations of claims 1, 10 or 19 in their present form. Neither reference teaches combining a first and second grant table via a clock divider having two different frequencies wherein the combination of those elements produces a hybrid grant generator mechanism having differing granularities as specified by the predetermined pattern. More specifically, although the Vanhoof reference arguably discloses grant calendars of differing granularity, there is no teaching or suggestion to combine or link those grant tables via a clock dividing mechanism so as to essentially produce a single hybrid grant generator of the present invention having grant tables of multiple granularity.

With regard to Claim 22, applicants respectfully disagree with the view that the combination of elements in the described recursive manner would be non-obvious. As stated above, applicants respectfully contend that the combination of multiple differing granularity grant tables according to the claimed hardware structure is not taught or suggested by the cited references either alone or in combination.

Other dependent claims not specifically addressed depend from and include all of the limitations of the independent claims, which have previously been discussed, and which are believed to be allowable.

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Based on the amendments to the claims and the remarks made herein, applicants submit that the claims as contained in the application are believed to be allowable.

Summary

In view of the foregoing, it is respectfully submitted that all remaining claims are now in condition for allowance and reconsideration is requested. If the Examiner believes that prosecution would be expedited by direct discussion, a telephone call to the undersigned would be welcomed.

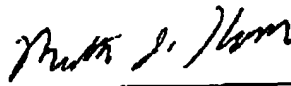
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If any additional fees are due with respect to this amendment, please charge them to Deposit Account No. 12-2325

Respectfully,

By



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Lucent Technologies Inc.
Date: March 23, 2004